

The present invention outlines a novel approach to utilizing the results of genomic sequence information by computer-directed polynucleotide assembly based upon information available in databases such as the human genome database. Specifically, the present invention may be used to select, synthesize and assemble a novel, synthetic target polynucleotide sequence encoding a target polypeptide. The target polynucleotide may encode a target polypeptide that exhibits enhanced or altered biological activity as compared to a model polypeptide encoded by a natural (wild-type) or model polynucleotide sequence.

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